RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
DIVISION OF AIR AND HAZARDOUS MATERIALS
AIR POLLUTION CONTROL REGULATION NO. 12

INCINERATORS

12. Incinerators

12.1 Definitions

As used in these regulations, the following terms shall, where the context permits, be construed as follows:

12.1.1 "Small incinerator" means an incinerator having a capacity of less than 2000 pounds per hour operated for the thermal degradation of Types 0, l, 2 and 3 refuse.

12.1.2 "Large incinerator" means an incinerator having a capacity of 2,000 pounds or more per hour operated for the thermal degradation of Types 0, l, 2 and 3 refuse.

12.1.3 "Pathological incinerator" means an incinerator designed for the thermal degradation of pathological waste (Type 4 refuse).

12.1.4 "Special incinerator" means an incinerator designed for the thermal degradation of Types 5 and 6 refuse.

12.1.5 "Sewage sludge incinerator" means an incinerator designed for the thermal degradation of the sludge produced by municipal sewage treatment facilities.

12.1.6 "Dry sludge" means the total solids residue determined in accordance with "224 G. Method for Solid and Semisolid Samples," Standard Methods for the Examination of Water and Wastewater, Thirteenth Edition, American Public Health Association, Inc., New York, New York,1971, pp. 539-41, as amended, such that:

(a) Evaporating dishes shall be ignited to at least 103°C rather than the 550°C specified in step 3 (a) (1);

(b) Determination of volatile residue, step 3 (b) may be deleted.

12.1.7 "Type O refuse" means trash, consisting of a mixture of highly combustible refuse such as paper, cardboard, cartons, wood boxes and combustible floor sweepings, containing approximately ten percent moisture and five percent incombustible solids, and having a heating value of approximately 8,500 Btu per pound as fired, and deriving from commercial and industrial activities. The mixtures contain up to ten percent by weight of plastic bags, coated paper, laminated paper, treated corrugated cardboard, oily rags and plastic or rubber scraps.

12.1.8 "Type 1 refuse" means rubbish, consisting of a mixture of combustible refuse such as paper, cardboard, cartons, wood scraps, foliage and combustible floor sweepings, containing approximately 25 percent moisture and ten percent combustible solids and having a heating value of approximately 6,500 Btu per pound as fired, and deriving from domestic, commercial and industrial activities. The mixture contains up to 20 percent by weight of restaurant or cafeteria refuse but contains little or no treated paper, plastic or rubber refuse.

12.1.9 "Type 2 refuse" means refuse, consisting of an approximately even mixture of rubbish and garbage by weight, containing up to 50 percent moisture and approximately seven percent incombustible solids, and having a heating value of approximately 4,300 Btu per pound as fired, and commonly deriving from apartment and residential occupancy.

12.1.10 "Type 3 refuse" means garbage, consisting of animal and vegetable refuse containing up to 70 percent moisture and up to five percent incombustible solids and having a heating value of approximately 2,500 Btu per pound as fired and deriving from restaurants, cafeterias, hotels, hospitals, markets and like installations.

12.1.11 "Type 4 refuse" means human and animal remains, consisting of carcasses, organs, and solid organic refuse from hospitals, laboratories, abbatoirs, animal pounds, and similar sources and any matter or materials involving or pertaining to disease or

disease-producing organisms, including infectious agents and helminths.

12.1.12 "Type 5 refuse" means gaseous, liquid or semiliquid by-product refuse from industrial operations not defined as a hazardous material.

12.1.13 "Type 6 refuse" means solid by-product refuse from industrial operations not defined as a hazardous material.

12.1.14 "Multiple chamber incinerator" means an incinerator with two or more refractory-lined combustion chambers in series separated physically by refractory walls, interconnected by gas passages, and employing adequate design parameters necessary for maximum combustion of the refuse materials.

12.1.15 "Single chamber flue-fed incinerator" means an incinerator with one combustion chamber and a single flue that serves as both the charging chute and the flue to transport products of combustion to the atmosphere.

12.1.16 "Hazardous material" means any material or combination of materials of a solid, liquid, contained gaseous, or semisolid form that because of quantity, concentration, or physical, chemical or other characteristics may:

(a) cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or

(b) pose a substantial present or potential hazard to human health or the environment.

Such materials include, but are not limited to, those that are toxic, corrosive, flammable, irritants, strong sensitizers, substances that are assimilated or concentrated in and are detrimental to tissue or that generate pressure through decomposition or chemical reaction.

12.2 Applicability

12.2.1 Any incinerator, except residential incinerators and those used for the degradation of hazardous materials, must comply with

the provisions and limitations of this regulation.

12.3 Emission Standards

12.3.1 Small Incinerators
No person shall construct, install, use or cause to be used any small incinerator that will emit more than 0.16 gr/dscf (0.36 g/dscm) of particulate matter corrected to 12 percent CO_2, maximum two-hour average.

12.3.2 Large, Pathological and Special Incinerators
No person shall construct, install, use or cause to be used any large, pathological or special incinerator that will emit more than 0.08 gr/dscf (0.18 g/dscm) of particulate matter corrected to 12 percent CO_2, maximum two-hour average.

12.3.3 Particulate Emissions from Sewage Sludge Incinerators
No person shall construct, install, use or cause to be used any sewage sludge incinerator that will emit more than 1.30 pounds of particulate matter per ton of dry sludge input.

12.4 Permit to Construct

12.4.1 No person shall construct, install, use or cause to be used any incinerator unless it is a type approved by the Director for being effective for air pollution control.

12.4.2 No person shall construct, install or operate any incinerator before the following minimum information has been submitted to the Director:

(a) Design parameters of the incinerator;

(b) Design drawings of the incinerator;

(c) Design specifications of air pollution control equipment;

(d) Types of waste proposed to be incinerated; and

(e) Any other information required by the Director.

12.5 Determination of Compliance
Compliance with Section 12.3 shall be determined by one of the

following procedures:

(a) Emission testing conducted by the owner or operator of the source according to Method 5 of Appendix A to Part 60 of Title 40 of the Code of Federal Regulations, or by another method that has the prior approval of or is required by the Director;

(b) Technical evaluation based on such factors which may include type(s) of refuse burned; design of the incinerator, design efficiency of air pollution control systems, and emission test results on similar incinerators;

(c) Any other emission testing method as required and approved by the Director.

12.6 Prohibitions

12.6.1 No person shall construct, install, use or cause to be used any single chamber flue-fed incinerator.

12.7 Hazardous Waste Incinerators

12.7.1 Rules and regulations governing the incineration of hazardous waste are contained in the Division's hazardous waste regulations under the title, "Hazardous Waste Management Facility Operating Permit Rules and Regulations Incinerators."